In the Claims

Please replace all prior versions of claims in the application with the following claims:

1.   (Canceled)

2.   (Currently amended) ~~The method of claim 1~~ In a wireless network comprising a plurality of nodes, a method for selecting, by a first node, a channel for communicating with a second node, the first node having at least two network interfaces with radios tuned to orthogonal channels, the method comprising:

    discovering network interfaces of the second node available for communicating with the first node;

    with respect to each available network interface of the second node, periodically making a channel quality estimate; and

    making a channel selection,

    wherein discovering available network interfaces comprises:

    broadcasting an address resolution protocol request;

    receiving on a first channel a first address resolution protocol response from the second node;

    recording medium access control address information contained in the first address resolution protocol response;

    initially selecting the first channel for communicating with the second node; and

    for each additional address resolution protocol response received from the second node, recording medium access control address information contained in the additional address resolution protocol response.

3.   (Canceled)

4.   (Currently amended)   ~~The method of claim 3~~ In a wireless network comprising a plurality of nodes, a method for selecting, by a first node, a channel for communicating with a second node, the first node having at least two network interfaces with radios tuned to orthogonal channels, the method comprising:

discovering network interfaces of the second node available for communicating with the first node;

with respect to each available network interface of the second node, periodically making a channel quality estimate; and

making a channel selection,

wherein discovering available network interfaces is in accordance with a protocol, and wherein discovering available network interfaces further comprises discovering whether the second node is capable of operating in accordance with the protocol,

wherein discovering whether the second node is capable of operating in accordance with the protocol comprises:

sending a channel select message along each known network interface of the second node;

if a channel select acknowledgment response is received from each known network interface of the second node, classifying the second node as being capable of operating in accordance with the protocol;

if no channel select acknowledgment response is received from a known network interface after expiration of a timeout period, and if a maximum number of unacknowledged retransmissions has not been exceeded, retransmitting a channel select message along the interface; and

if a maximum number of unacknowledged retransmissions has been exceeded, classifying the second node as not being capable of operating in accordance with the protocol.

5.   (Original)   The method of claim 4 further comprising, if the second node is classified as being capable of operating in accordance with the protocol, but a medium access control address of a known network interface of the second node has not yet been discovered:

sending an address resolution protocol request along the network interface;

if an address resolution protocol response is not received before expiration of a timeout

period, and if a maximum number of failed retransmissions has not been exceeded, retransmitting

an address resolution protocol request; and

if a maximum number of unacknowledged retransmissions has been exceeded, considering

the network interface to have a disabled radio transceiver.

6.   (Canceled)

7.   (Currently amended) ~~The method of claim 6~~ In a wireless network comprising a plurality of

nodes, a method for selecting, by a first node, a channel for communicating with a second node, the

first node having at least two network interfaces with radios tuned to orthogonal channels, the

method comprising:

discovering network interfaces of the second node available for communicating with the first

node;

with respect to each available network interface of the second node, periodically making a

channel quality estimate; and

making a channel selection,

wherein making a channel quality estimate comprises:

sending a probe message along the network interface;

receiving a response to the probe message from the second node; and

calculating a round-trip latency time associated with sending the probe message and

receiving the response, further comprising:

computing a smoothed round-trip time (SRTT) value according to a formula:

$$SRTT = \alpha * RTT_{new} + (1-\alpha) * SRTT_{old}$$

wherein α is a parameter chosen with a range from 0 to 1, wherein RTT_{new} is a most recent

round-trip latency time measurement, and wherein $SRTT_{old}$ is a previously-computed SRTT value.

8.–21. (Canceled)

22.   (Original)   A computer-readable medium on which is stored a data structure for use by a
first wireless network node in selecting a channel for transmitting data to a second wireless network
node in accordance with a protocol, the data structure comprising:

a data field for identifying the second node;

a data field for indicating whether the second node is known to use the protocol;

a data field for storing a physical address associated with each known network interface of
the second node;

a data field for storing a channel quality estimate associated with each known network
interface of the second node;

a data field for identifying a current preferred channel for transmitting data to the second
node;

a data field for recording a most recent time at which a channel was selected;

a data field for recording a most recent time at which a message was either sent to or
received from the second node; and

a data field for storing times associated with unacknowledged messages.

23.   (Original)   The computer-readable medium of claim 22 wherein the data field for
identifying the second node stores one of (a) an Internet protocol address, (b) a medium access
control address or (c) a DNS name.

24.   (Original)   The computer-readable medium of claim 22 wherein the data field for storing
a physical address associated with each known network interface of the second node stores a
medium access control address.

25.–36. (Canceled)